

We claim:

1. A method for screening a subject for a prostate disorder or at risk of developing a prostate disorder, the method comprising:
  - a) detecting a level of expression of at least one gene identified in Tables 2, 3 or 4 in a sample of prostate tissue obtained from the subject to provide a first value, with the proviso that if expression of only one gene is detected that the gene is not FASN; and
  - b) comparing the first value with a level of expression of the at least one gene identified in Tables 2, 3 or 4 in a sample of prostate tissue obtained from a disease-free subject, wherein a greater expression level in the subject sample compared to the sample from the disease-free subject is indicative of the subject having a prostate disorder or at risk of developing a prostate disorder.
2. The method of claim 1, wherein the level of expression of at least two genes identified in Tables 2, 3 or 4 are detected.
3. The method of claim 1, wherein the at least one gene identified in Tables 2, 3 or 4 is selected from the group consisting of hepsin, prostate differentiation factor, alpha-methylacyl-CoA racemase, fatty acid synthase, prostate specific antigen, alternative splice form 2 and prostate specific antigen, alternative splice form 3.
4. The method of claim 1, wherein the prostate disorder is selected from the group consisting of localized prostate cancer, metastatic prostate cancer, prostatitis, benign prostatic hypertrophy and benign prostatic hyperplasia.
5. The method of claim 1, wherein the level of expression of the gene is determined by detecting the level of expression of a mRNA corresponding to the gene.
6. The method of claim 5, wherein the level of expression of mRNA is detected by techniques selected from the group consisting of Northern blot analysis, reverse transcription PCR and real time quantitative PCR.
7. The method of claim 1, wherein the level of expression of the gene is determined by detecting the level of expression of a protein encoded by the gene.

8. The method of claim 7, wherein the level of expression of the protein is detected through western blotting by utilizing a labeled probe specific for the protein.
9. The method of claim 8, wherein the probe is an antibody.
10. The method of claim 9, wherein the antibody is a monoclonal antibody.
11. A method for monitoring the progression of a prostate disorder in a subject having, or at risk of having, a prostate disorder comprising measuring a level of expression of at least one gene identified in Tables 2, 3 or 4 over time in a prostate tissue sample obtained from the subject with the proviso that if expression of only one gene is detected that the gene is not FASN, wherein an increase in the level of expression of the at least one gene over time is indicative of the progression of the prostate disorder in the subject.
12. The method of claim 11, wherein the level of expression of at least two genes identified in Tables 2, 3 or 4 is measured.
13. The method of claim 11, wherein the at least one gene identified in Tables 2, 3 or 4 is selected from the group consisting of hepsin, prostate differentiation factor, alpha-methylacyl-CoA racemase and fatty acid synthase, prostate specific antigen, alternative splice form 2 and prostate specific antigen, alternative splice form 3.
14. The method of claim 11, wherein the prostate disorder is selected from the group consisting of localized prostate cancer, metastatic prostate cancer, prostatitis, benign prostatic hypertrophy and benign prostatic hyperplasia.
15. The method of claim 11, wherein the level of expression of the gene is determined by detecting the level of expression of a mRNA corresponding to the gene.
16. The method of claim 15, wherein the level of expression of mRNA is detected by techniques selected from the group consisting of Northern blot analysis, reverse transcription PCR and real time quantitative PCR.
17. The method of claim 11, wherein the level of expression of the gene is determined by detecting the level of expression of a protein encoded by the gene.

18. The method of claim 17, wherein the level of expression of the protein encoded by the gene is detected through western blotting by utilizing a labeled probe specific for the protein.
19. The method of claim 18, wherein the labeled probe is an antibody.
20. The method of claim 19, wherein the antibody is a monoclonal antibody.
21. A method for identifying agents for use in the treatment of a prostate disorder comprising:
  - a) contacting a sample of diseased prostate cells with a candidate agent;
  - b) detecting a level of expression of at least one gene in the diseased prostate cells, wherein the at least one gene is identified in Tables 2, 3 or 4, with the proviso that if expression of only one gene is detected that the gene is not FASN; and
  - c) comparing the level of expression of the at least one gene in the sample in the presence of the candidate agent with a level of expression of the at least one gene in cells that are not contacted with the candidate agent, wherein a decreased level of expression of the at least one gene in the sample in the presence of the candidate agent relative to the level of expression of the at least one gene in the sample in the absence of the candidate agent is indicative of an agent useful in the treatment of a prostate disorder.
22. The method of claim 21 wherein the level of expression of at least two genes in the sample is detected in step (b).
23. The method of claim 21, wherein the at least one gene identified in Tables 2, 3 or 4 is selected from the group consisting hepsin, prostate differentiation factor, alpha-methylacyl-CoA racemase, fatty acid synthase, prostate specific antigen, alternative splice form 2 and prostate specific antigen, alternative splice form 3.
24. The method of claim 21, wherein the prostate disorder is selected from the group consisting of localized prostate cancer, metastatic prostate cancer, prostatitis, benign prostatic hypertrophy and benign prostatic hyperplasia.
25. The method of claim 21, wherein the level of expression of the gene is determined by detecting the level of expression of a mRNA corresponding to the gene.

26. The method of claim 25, wherein the level of expression of mRNA is detected by techniques selected from the group consisting of Northern blot analysis, reverse transcription PCR and real time quantitative PCR.

27. The method of claim 21, wherein the agent is selected from the group consisting of antisense nucleotides, ribozymes and double stranded RNAs.

28. The method of claim 21, wherein the level of expression of the gene is determined by detecting the level of expression of a protein encoded by the gene.

29. The method of claim 28, wherein the level of expression of the protein encoded by the at least one gene is detected through western blotting by utilizing a labeled probe specific for the protein.

30. The method of claim 29, wherein the labeled probe is an antibody.

31. The method of claim 30, wherein the antibody is a monoclonal antibody.

32. A method of inhibiting undesired proliferation of a prostate cell, the method comprising administering to the cell an effective amount of an agent that can decrease the expression of at least one gene identified in Tables 2, 3 or 4, with the proviso that if expression of only one gene is inhibited that the gene is not FASN.

33. The method of claim 32, wherein the agent is selected from the group consisting of antisense nucleotides, ribozymes and double stranded RNAs.

34. The method of claim 33, wherein the agent comprises an isolated nucleic acid molecule comprising an antisense nucleotide sequence derived from at least one gene identified in Tables 2, 3 or 4.

35. The method of claim 34, wherein antisense nucleotide sequences are derived from at least two genes identified in Tables 2, 3 or 4.

36. The method of claim 32, wherein the at least one gene is selected from the group consisting of hepsin, prostate differentiation factor, alpha-methylacyl-CoA racemase, fatty acid synthase, prostate specific antigen, alternative splice form 2 and prostate specific antigen, alternative splice form 3.

37. The method of claim 32, wherein the undesired proliferation is associated with a condition selected from the group consisting of localized prostate cancer, metastatic prostate cancer, prostatitis, benign prostatic hypertrophy and benign prostatic hyperplasia.
38. The method of claim 32, wherein the agent is an antagonist that inhibits a protein encoded by at least one gene identified in Tables 2, 3 or 4.
39. The method of claim 38, wherein the at least one gene is selected from the group consisting of hepsin, FASN and MOAT-B.
40. The method of claim 38, wherein the antagonist is an antibody specific for the protein.
41. The method of claim 40, wherein the antibody is a monoclonal antibody.
42. The method of claim 40, wherein the monoclonal antibody is conjugated to a toxic reagent.
43. The method of claim 32, wherein the cell is present in a human.
44. A method for monitoring the efficacy of a treatment of a subject having a prostate disorder or at risk of developing a prostate disorder with an agent, the method comprising:
  - a) obtaining a pre-administration sample from the subject prior to administration of the agent;
  - b) detecting a level of expression of at least one gene identified in Tables 2, 3 or 4 in the pre-administration sample, with the proviso that if expression of only one gene is detected that the gene is not FASN;
  - c) obtaining one or more post-administration samples from the subject;
  - d) detecting a level of expression of the at least one gene in the post-administration sample or samples;
  - e) comparing the level of expression of the at least one gene in the pre-administration sample with the level of expression of the at least one gene in the post-administration sample; and
  - f) adjusting the administration of the agent accordingly.

45. The method of claim 44, wherein the level of expression of at least two genes identified in Tables 2, 3 or 4 is detected in step (b).
46. The method of claim 44, wherein the at least one gene is selected from the group consisting of hepsin, prostate differentiation factor, alpha-methylacyl-CoA racemase, fatty acid synthase, prostate specific antigen, alternative splice form 2 and prostate specific antigen, alternative splice form 3.
47. The method of claim 44, wherein the prostate disorder is selected from the group consisting of localized prostate cancer, metastatic prostate cancer, prostatitis, benign prostatic hypertrophy and benign prostatic hyperplasia.
48. The method of claim 44, wherein the level of expression of the gene is determined by detecting the level of expression of a mRNA corresponding to the gene.
49. The method of claim 48, wherein the level of expression of mRNA is detected by techniques selected from the group consisting of Northern blot analysis, reverse transcription PCR and real time quantitative PCR.
50. The method of claim 44, wherein the level of expression of the gene is determined by detecting the level of expression of protein encoded by the gene.
51. The method of claim 50, wherein the level of expression of protein encoded by the gene is detected through western blotting by utilizing a labeled probe specific for the protein.
52. The method of claim 51, wherein the labeled probe is an antibody.
53. The method of claim 52, wherein the antibody is a monoclonal antibody.
54. A viral vector comprising a promoter and/or enhancer of at least one gene selected from the group consisting of the genes identified in Tables 2, 3 or 4 with the proviso that the gene is not FASN, operably linked to a coding region of a gene that is essential for replication of the vector, wherein the vector is adapted to replicate upon transfection into a diseased prostate cell.
55. The vector of claim 54, wherein the viral vector is an adenoviral vector.
56. The vector of claim 54, wherein the coding region of the gene essential for replication of the vector is selected from the group consisting of E1a, E1b, E2 and E4 coding regions.

57. The vector of claim 54, further comprising a nucleotide sequence encoding a heterologous gene product.

58. A nucleic acid construct that comprises a promoter and/or enhancer of at least one gene selected from the group consisting of the genes identified in Tables 2, 3 or 4 with the proviso that the gene is not FASN, operably linked to a coding region of a heterologous gene product.

59. The nucleic acid construct of claim 58, wherein the heterologous gene product is an RNA molecule.

60. The nucleic acid construct of claim 59, wherein the RNA molecule is an antisense RNA or a ribozyme.

61. The nucleic acid construct of claim 58, wherein the heterologous gene product is a protein.

62. The nucleic acid construct of claim 61, wherein the protein is selected from the group consisting of a cytokine or a toxin.